950090

Site Team Evaluation Prioritization

ILD980900002 - McHenry
S. California Chemical
ILD 059483081
SF/HRS 9/16/99

CERCLA Report

Illinois Environmental Protection Agency

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SECTION 1

SITE BACKGROUND

1.1 INTRODUCTION

S. California Chemical (ILD 059483081) was added to the Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS) in March, 1989 as a result of a request for discovery action initiated by the State of Illinois. This action was taken because of contamination found in the Village of Union Well Number 3. The facility received its initial CERCLA evaluation in the form of a Preliminary Assessment (PA) report by the Illinois Environmental Protection Agency (IEPA) in February, 1990. In May, 1994 the Illinois EPA conducted a CERCLA Integrated Site Assessment which involved the collection of environmental samples.

On April 1, 1998 the Illinois EPA's Site Assessment Unit was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a CERCLA Site Team Evaluation Prioritization (STEP) investigation of the Southern California Chemical Company site located in Union, Mc Henry county, Illinois. This investigation was conducted under the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.

In March, 1998, the Illinois EPA's Site Assessment Program prepared and submitted to the Region V offices of the U.S. Environmental Protection Agency a STEP inspection work plan for the Southern California Chemical Company facility. The sampling portion of the Integrated Site Assessment inspection was conducted on April 14 and 15, 1998 when the Illinois Environmental Protection Agency sampling team

collected a total of one municipal well, six GeoProbe groundwater samples, and ten GeoProbe soil samples.

During the 1994 CERCLA inspection the IEPA collected a total of one municipal well, two monitoring well samples located on the manufacturing area property near the west side of the dump area, and ten soil samples collected in the dump area and wetland. The soil samples were collected at shallow depths using hand trowels and augers. Samples collected during the 1998 inspection were collected at greater depths using the GeoProbe. A sample summary and map of the 1994 CERCLA inspection is included at the back of this report.

The IEPA performed the CERCLA Site Team Evaluation Prioritization activities to fill in information gaps which may have existed in previous CERCLA investigations and to determine whether, or to what extent, the site poses a threat to human health and the environment. During the STEP inspection soil and groundwater samples revealed the presence contaminants at the site.

1.2 SITE DESCRIPTION

The Southern California Chemical Company site originally consisted of three parcels of property. Parcels one and two consisted of the inactive manufacturing plant located at 17415 Jefferson Street, McHenry County, Illinois. This property contains approximately 2.5 acres and is in the process of Resource Conservation and Recovery Act (RCRA) Closure. This property is currently owned by PHIBRO-TECH, Inc. of Ft. Lee, New Jersey. The third parcel consists of a dump area of approximately 5 acres of land adjacent on the east side of parcel two. The STEP inspection focused on parcel three

since parcel one and two are covered under RCRA authority and currently undergoing closure activity.

The dump area property is currently under uncertain ownership. A Tax Records check at the McHenry County Courthouse in Woodstock, Illinois on March 30, 1994 indicated that the taxes on the property have been delinquent since 1987 and that the last person to pay the taxes was Edwin B. King of CALSO IL CORP in Austin, Texas.

The Southern California Chemical Company site and dump area is located in the southeast portion of the village of Union, McHenry County, Illinois. The property is bordered on the north by Jefferson Street, on the east by private property, on the west by the Solarcrete Corporation and on the south by railroad tracks and farmland. North of the property across Jefferson Street lies Evergreen Park School and the Dorina So Good Bar-B-Que Company that makes bottled Bar-B-Que sauce. The site is situated in the Northwest quarter, Southeast quarter, Section four, Township forty-three North, Range six East of the Third Principal Meridian in McHenry County, Illinois. A four mile radius map of the area surrounding the Southern California Company site is in Appendix A of this report. There is no 15-mile surface water pathway for offsite drainage.

1.3 SITE HISTORY

The property where the chemical manufacturing took place is owned by PHIBRO-TECH, INC. and the dump area to the east was last owned by Edwin B. King of CALSO IL CORP of Austin Texas, who hasn't paid the property taxes since 1987. Past uses of the property included a grain processing plant, a milk processing plant and an asphaltic roofing plant. The inorganic chemical manufacturing operations at the site

began in 1970 when the original owners of Southern California Chemical Company leased the facility. They purchased the facility in 1982, which consisted of three parcels of land known as parcels one, two and three. The parent company of the current owners, Phibro-Tech, Inc. purchased parcels one and two, but not parcel three, in 1984. Parcel three is a five acre tract of land located adjacent east of the manufacturing parcels. The current owners operated the facility until closing in 1988. The original manufacturing facility consisted of four buildings of approximately 24,000 square feet located on two and a half acres of land. Activities conducted by Southern California Chemical Company involved the manufacture of various inorganic chemicals including copper sulfate pentahydrate and copper oxide, proprietary and patented continuous ammonia etchants as well as the recycling and refining of spent circuit board etchant which was resold to the printed circuit board processors after purification.

Proprietary products manufactured included solder strippers, brighteners, conditioners and types of etchants. A by-product of copper oxide residuals was sold to the agricultural and wood preserving industries. Feedstocks for the etchant recycling process consisted of a portion of the received spent etchant being placed in a reaction vessel charged with sodium hydroxide which results in a reaction that formed ammonia and a suspension of cupric oxide. The ammonia was scrubbed with hydrogen chloride which resulted in a solution of ammonium chloride. The ammonium chloride was placed, along with the other portion of spent etchant, into another reactor vessel where anhydrous ammonia and air were added which resulted in a refined printed circuit board etchant which was sold back to the printed circuit board manufacturers.

The company had a number of hazardous waste storage containers, including six

aboveground storage tanks of six thousand to ten thousand gallon capacity and potential storage capacity for up to twelve hundred fifty-five gallon drums. The facility shut down operations and removed process equipment in 1988. The parcel of land located east of the manufacturing area has exposed fragments of buried printed circuit boards which were deposited over the years the facility was in operation.

1.4 REGULATORY STATUS

Southern California Chemical Company was regulated under RCRA (Resource Conservation and Recovery Act) as a Small Quantity Generator and is in the process of undergoing RCRA Closure of the area used for manufacturing. This closure process does not involve the dump area to the east.

The facility was issued permit number 111090AAG by the Illinois Environmental Protection Agency's Division of Air Pollution Control on March 16, 1983 for the operation of one scrubber used in the ferric chloride process. The IEPA Division of Land Pollution Control issued the company Permit Number 1981-45-OP in 1981 to operate a waste management site to recover spent etchant; and the Illinois EPA Division of Water Pollution Control issued permit 1984-EB-2998 on February 6, 1984 for a concentration, precipitation and pH adjustment industrial treatment works to treat 11,250 GPD DAF of copper oxide production and wash wastewater with force main discharge to the Kishwaukee River but the treatment works was not constructed.

The property has not had any operations on it that were subject to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Atomic Energy Act (AEA) or Uranium Mill Tailings Radiation Control act (UMTRCA).

SECTION 2

SITE TEAM EVALUATION PRIORITIZATION ACTIVITIES

2.1 RECONNAISSANCE ACTIVITIES

The site reconnaissance visit was conducted by the Site Assessment Unit of the Illinois Environmental Protection Agency on March 19, 1998 to determine potential sampling locations in the dump area and property to the north. Prior to the recon representatives of Phibro-Tech, Inc. were contacted by phone. They stated that the company was not involved in any deposition of wastes at the dump area and did not choose to have a representative present. During the recon the author did meet with a representative of TechAlloy, a manufacturing company with a plant located approximately 500 feet northeast and whose property includes the wetland and field located due north of the site across Jefferson street. The wetland receives some of the drainage from the dump area during periods of heavy rainfall. The Techalloy representative gave permission to sample their property with an X-Ray Fluorescence (XRF) instrument and agreed to let the IEPA collect soil/groundwater samples with the GeoProbe during the planned STEP inspection.

The dump area is surrounded by the S. California Chemical manufacturing buildings on the west, railroad tracks on the south, an active business on the east, and Jefferson Street on the north side. Union Evergreen School lies across Jefferson Street due north of the manufacturing buildings.

During the recon visit XRF readings were taken in the dump area and north across Jefferson Street to determine metal "hot spots" that may have been caused by activities at the site. The school property north of the site was recently inspected by the Illinois EPA

under the Brownfield program and some samples collected during the STEP inspection were in the field located adjacent to school property, which lies west of the field sampled.

2.2 SAMPLING ACTIVITIES

Sampling activities were conducted on April 14 and 15, 1998 when IEPA personnel collected five onsite, four offsite and one background soil samples, and three offsite, three onsite and one background water samples. All samples, with the exception of the background water and soil samples, were collected using the Geoprobe. The purpose of these samples was to determine if contamination was present onsite and if any contaminants have migrated offsite. All samples were analyzed for the Target Compound List (TCL) in Appendix C. Soil and Geoprobe groundwater organic samples were analyzed by Clayton Environmental Consultants, Inc. and soil and Geoprobe water inorganics were analyzed by American Analytical & Technical Services, Inc. Both laboratories were under contract with USEPA Region 5. The background water sample was collected from a Union municipal well and organics and inorganics were analyzed by USEPA Central Region Laboratory (CRL) in Chicago. The CRL also analyzed all water samples under its Special Analytical Services for sulfides, sulfates, chlorides and ammonia. All laboratory results were subsequently validated by USEPA Region 5. Sample locations are shown in figures 4 and 5 and described in Tables 1 and 2. Key sample analytical results from the sampling event are shown in Tables 3 and 4. The analytical results for the soil and water samples are compared to the Illinois Environmental Protection agency's Tiered Approach to Corrective Action Objectives

(TACO) and to Removal Action Levels (RAL's). Key samples are samples in which contaminants were detected at concentrations at least three times background levels, or had concentrations of potential health concerns.

2.3 KEY SAMPLES

Key samples are samples in which contaminants were detected at concentrations at least three times background levels, or had concentrations of potential health concerns. Analytes were found in onsite soil samples at levels that exceeded these health based benchmarks. These included semivolatile, pesticide, tentatively identified compounds and inorganic substances. Groundwater samples collected onsite contained elevated levels of volatile, semivolatile, pesticide, tentatively identified compounds and inorganic substances.

SECTION 3

SITE SOURCES

3.1 DUMP AREA

During the 1998 CERCLA Site Team Evaluation Prioritization inspection a total of five onsite soil and three groundwater samples were collected in the dump area. All samples were collected using the Geoprobe. Analytical results from these samples document the presence of a number of analytes at concentrations which meet the CERCLA program's criteria for observed contamination. The analytical results from the STEP soil samples showed that a number of semivolatile, pesticides, tentatively identified compounds and inorganic substances that are at levels greater than three times background, exceed Removal Action Levels or exceed TACO Cleanup Objectives. The area of contamination is located in the dump adjacent to the east side of the manufacturing property and contains samples X102, X103 and X107 and consists of approximately one and three-quarter acres. A groundwater sample collected in this area also had elevated levels of copper. Samples collected during a 1994 CERCLA inspection of the manufacturing area and a 1998 Redevelopment Assessment of the school property north of the site indicate that contamination is present in the top two feet of soil that is attributable to the site. Based on samples collected during the 1994 and 1998 CERCLA inspections and the 1998 redevelopment Assessment the area of contamination that can be attributable to the site is delineated by samples X118, X115 from the 1998 RA and X102, X103 and X107 from the 1999 CERCLA inspection. The total area of soil contamination is estimated at 2.2 acres.

Information obtained throughout this CERCLA investigation has identified the

dump area as the primary source type at the S. California Chemical Company site. Given the limited nature of the Site Team Evaluation Prioritization, and consequently, the inability of this investigation to fully characterize the site, the possibility exists that future remedial investigative activity may provide additional information that will lead to a more comprehensive understanding of this source or the identification of additional areas of concern.

SECTION 4

MIGRATION PATHWAYS

4.1 GROUNDWATER PATHWAY

The geology of the area consists of glacial drift which may be up to 145 feet thick overlying Ordovician bedrock. The Ordovician bedrock is composed of the Maquoketa Formation, which is a shale with interbedded dolomite, overlying the Galena Plattville Dolomite which is underlain by the St. Peter Sandstone. Groundwater is obtained locally from both the glacial and sandstone aquifers. The direction of groundwater flow in the area is to the northwest.

Groundwater is used exclusively for drinking in the area. Samples collected during the 1998 Step inspection and 1994 CERCLA inspection indicate that groundwater has been impacted by the site. Substances found include volatile, semivolatile, tentatively identified compounds and inorganic substances.

The nearest Public well is Union well number 4 which is 760 feet deep in the shallow bedrock and cased to 133 feet located (b) (9) [redacted]. The following table, derived from USGS topographic and city maps, lists the estimated population using groundwater within a four mile radius:

Estimated Groundwater Target Population	
On a source	0
0 to 1/4 mile	23
>1/4 to 1/2 mile	625
>1/2 to 1 mile	41

>1 to 2 miles	294
>2 to 3 miles	434
>3 to 4 miles	3,774

4.2 SURFACE WATER PATHWAY

No surface water samples were collected during the April 14 and 15, 1998 STEP inspection. The property is flat with no noticeable overland flow route to surface water and drainage from the site would flow north under Jefferson Street into a wetland area and end there. The wetland has no outlet and any standing water would eventually evaporate and/or soak into the soil. The wetland is not considered to be perennial since it only contains water on a temporary basis. The 15-mile surface water route was not evaluated since there is no known Probable Point of Entry of runoff from the site into surface water bodies other than the wetland area.

4.3 AIR PATHWAY

Air monitoring with a TVA (Toxic Vapor Analyzer) was conducted during the STEP inspection but did not indicate a release to the breathing zone. Portions of the landfill area are sparsely vegetated and the potential exists for the release of windborne particulates leaving the property since previous investigations found contaminants in the top 6 inches of soil.

The dump area is not fenced along the east and south sides and there is no security guard present to prevent unauthorized access. The property is located at the southeastern edge of Union, IL. and has commercial businesses located to the north and northeast

across Jefferson Street. The Union Evergreen School building is located approximately 600 feet northwest and school property lies within 100 feet of the dump area. There are approximately 5,546 people who live within a 4-mile radius of the site. The estimated population potential for release is:

Estimate Air Target Population

On a source	0
0 to 1/4 mile	378
>1/4 to 1/2 mile	625
>1/2 to 1 mile	41
>1 to 2 miles	294
>2 to 3 miles	434
>3 to 4 miles	3,774

4.4 SOIL EXPOSURE PATHWAY

Soil samples collected during the STEP inspection document areas of observed contamination by contaminants that are attributable to the site. The dump area is readily accessible from the east and south sides to trespassers. During previous investigations tire tracks from All Terrain Vehicles were seen in the dump area. The nearest individual (residence) is located approximately 800 feet west and the nearest school, Evergreen Park School, is located northwest of the site across Jefferson Street and has 280 students. Samples collected during a 1998 Redevelopment Assessment of the school property indicate that the school property has been impacted by the site. A review of USGS topographic maps, city maps and U.S. Census data indicate that approximately 1,044

people live within a one-mile radius of the site. The estimated population within one mile of the site is:

On a source	0
0 to 1/4 mile	378
>1/4 to 1/2 mile	625
>1/2 to 1 mile	41

A review by the Illinois Department of Natural Resources did not indicate any terrestrial sensitive environments near the S. California Chemical site. Wetland Inventory Maps indicate there are approximately 7 acres of wetlands within a half mile of the site.

SECTION 5

ADDITIONAL RISK BASED OBJECTIVES

This section discusses additional screening objectives used to evaluate the S. California Chemical site. These objectives have not been used to assess the site for Hazard Ranking System (HRS) purposes.

5.1 TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO)

The Illinois EPA's TACO Guidance Document (proposed rules under 35 IL Adm. Code Part 742), can be used to develop site specific remediation objectives. This document discusses key elements required to develop risk-based remediation objectives, how background values may be used, and provides guidance through three tiers of the risk-based approach. The Illinois EPA uses this guidance, and the groundwater standards established in 36 IL Adm. Code 620, to determine soil and groundwater remediation objectives.

5.2 TACO SOIL OBJECTIVES

The soil contaminants from the S. California Chemical site were compared to the soil remediation objectives established for residential properties, with the inhalation, ingestion and migration to groundwater routes each evaluated. Tier 1 consists of "look-up" tables, which considers limited site-specific information and are based on simple, numeric models. Several samples exceeded these benchmarks for semivolatile and inorganic substances.

SECTION 6

6.1 BIBLIOGRAPHY

Illinois Environmental Protection Agency, 1989. Site Preliminary Assessment for S. California Chemical Company, ILD 059483081.

Illinois Department of Public Health well construction reports/Geological Water Survey records for the Union, IL. area.

Illinois Environmental Protection Agency, Division of Public Water Supplies. Well Inventory Sheets for the city of Union, IL.

Illinois Department of Natural Resources. Endangered Species Consultation Agency Action Report, September, 1998.

Illinois Department of Public Health. State Initial Evaluation, S. California Chemical, Mc Henry county, IL., 1998.

Illinois Environmental Protection Agency. Integrated Assessment report for S. California Chemical Company, ILD 059483081, 1994.

Illinois Department of Natural Resources. Endangered Species Consultation Program, Agency Action Report for S. California Chemical Company, September 21, 1998.

Flood Rate Insurance Map, August 15, 1983 for the village of Union, IL. Federal Emergency Management Agency.

USGS, 1975, Marengo North, IL. Quadrangle, 7.5 minute series.

USGS, 1992, Woodstock, IL. Quadrangle, 7.5 minute series.

USGS, 1975, Marengo South, IL. Quadrangle, 7.5 minute series.

USGS, 1972, Huntley, IL. Quadrangle, 7.5 minute series.

FIGURE 1

STATE OF ILLINOIS LOCATION MAP

S. California Chemical

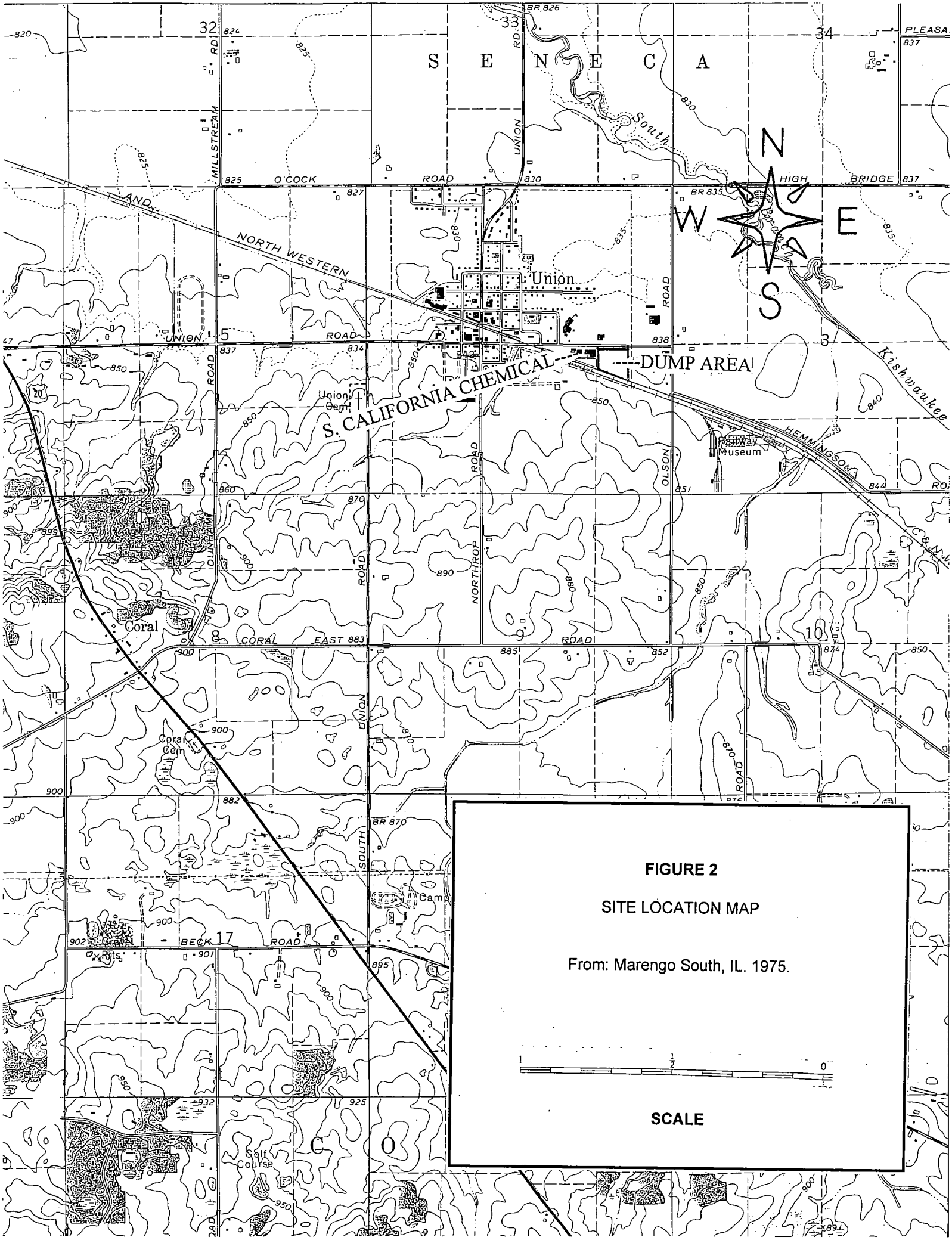

FIGURE 2

SITE LOCATION MAP

From: Marengo South, IL. 1975.

1 ½ 0

SCALE

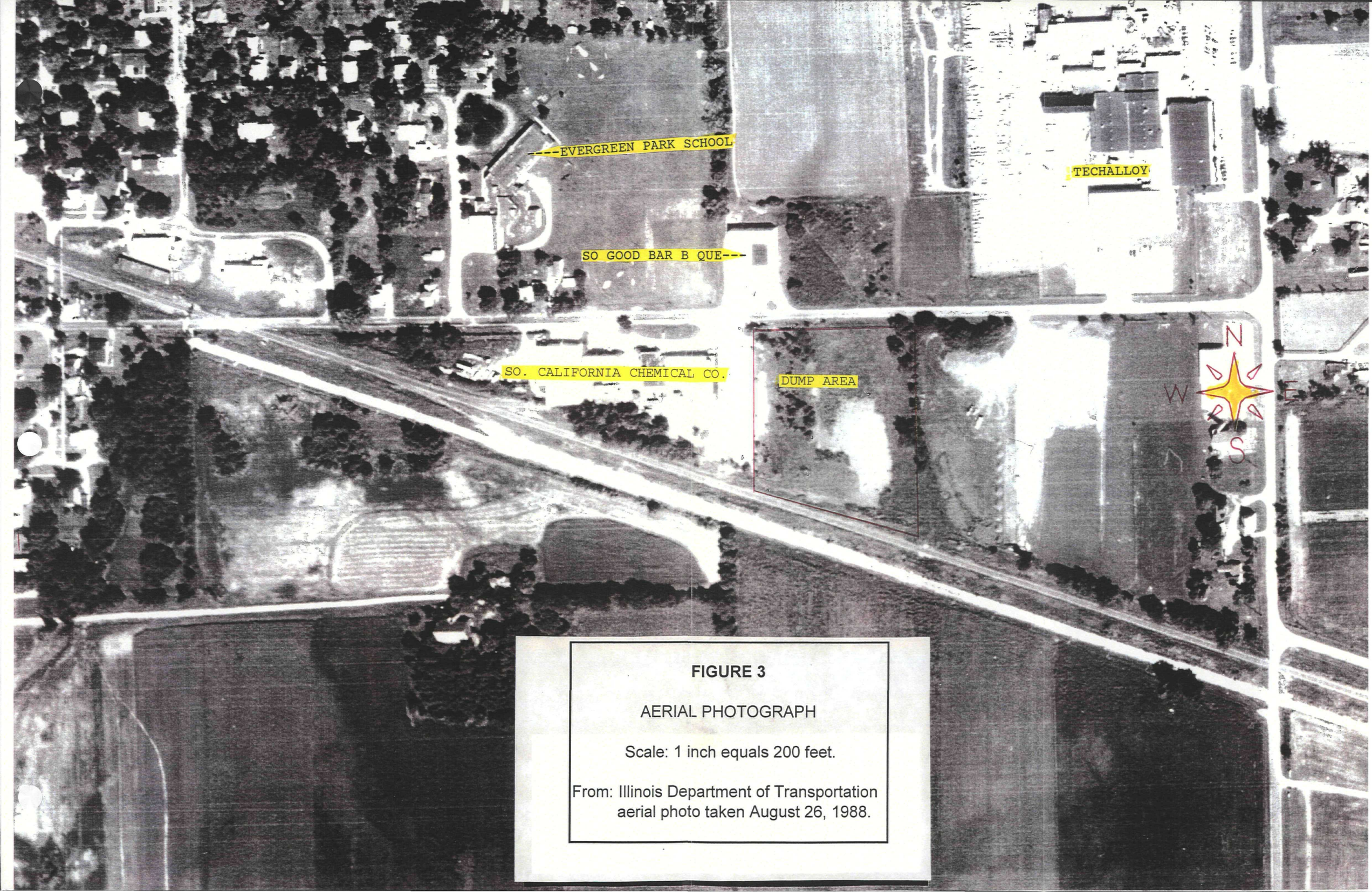

FIGURE 3

AERIAL PHOTOGRAPH

Scale: 1 inch equals 200 feet.

From: Illinois Department of Transportation aerial photo taken August 26, 1988.

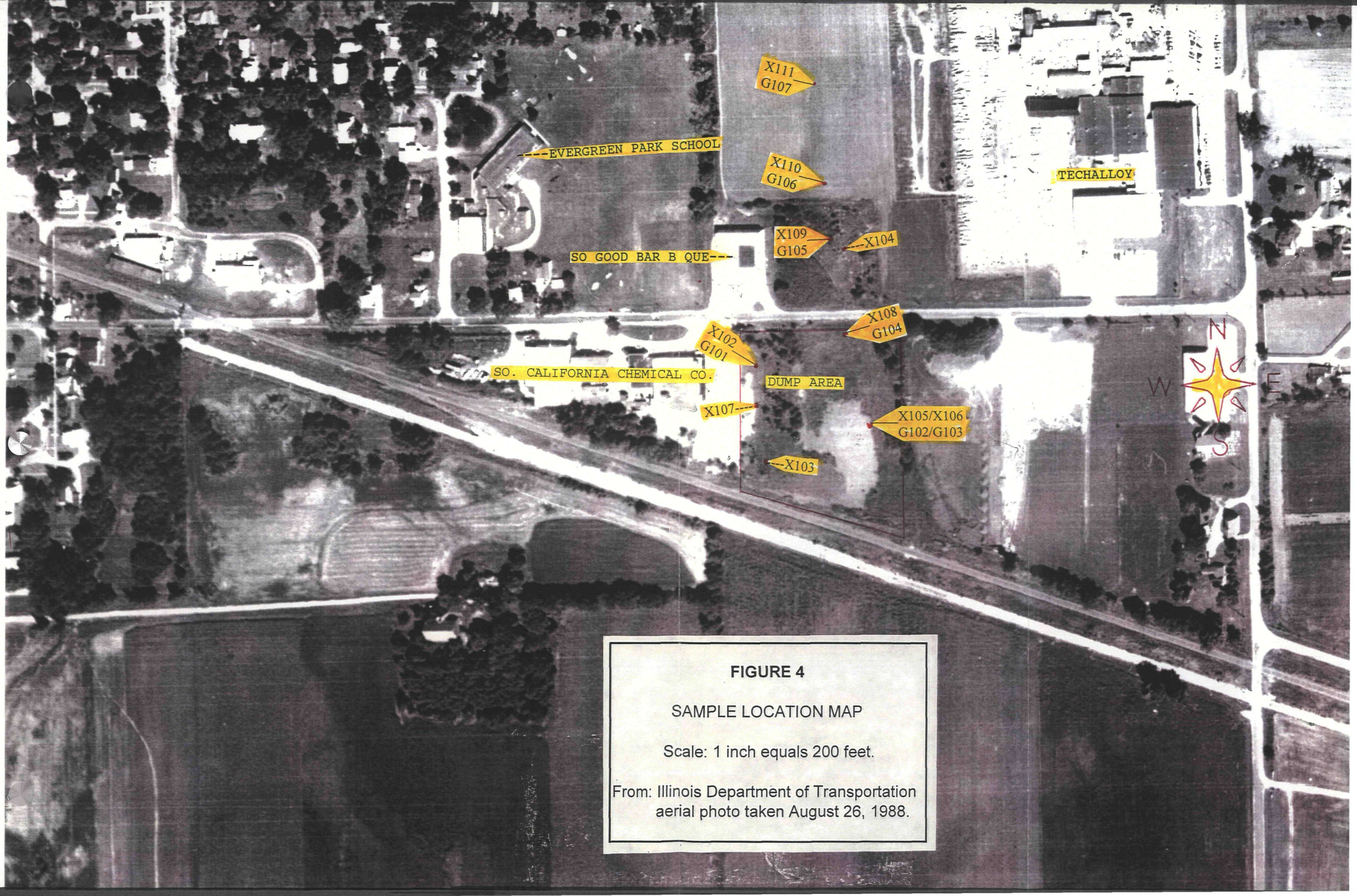

FIGURE 4

SAMPLE LOCATION MAP

Scale: 1 inch equals 200 feet.

From: Illinois Department of Transportation aerial photo taken August 26, 1988.

(b) (9)

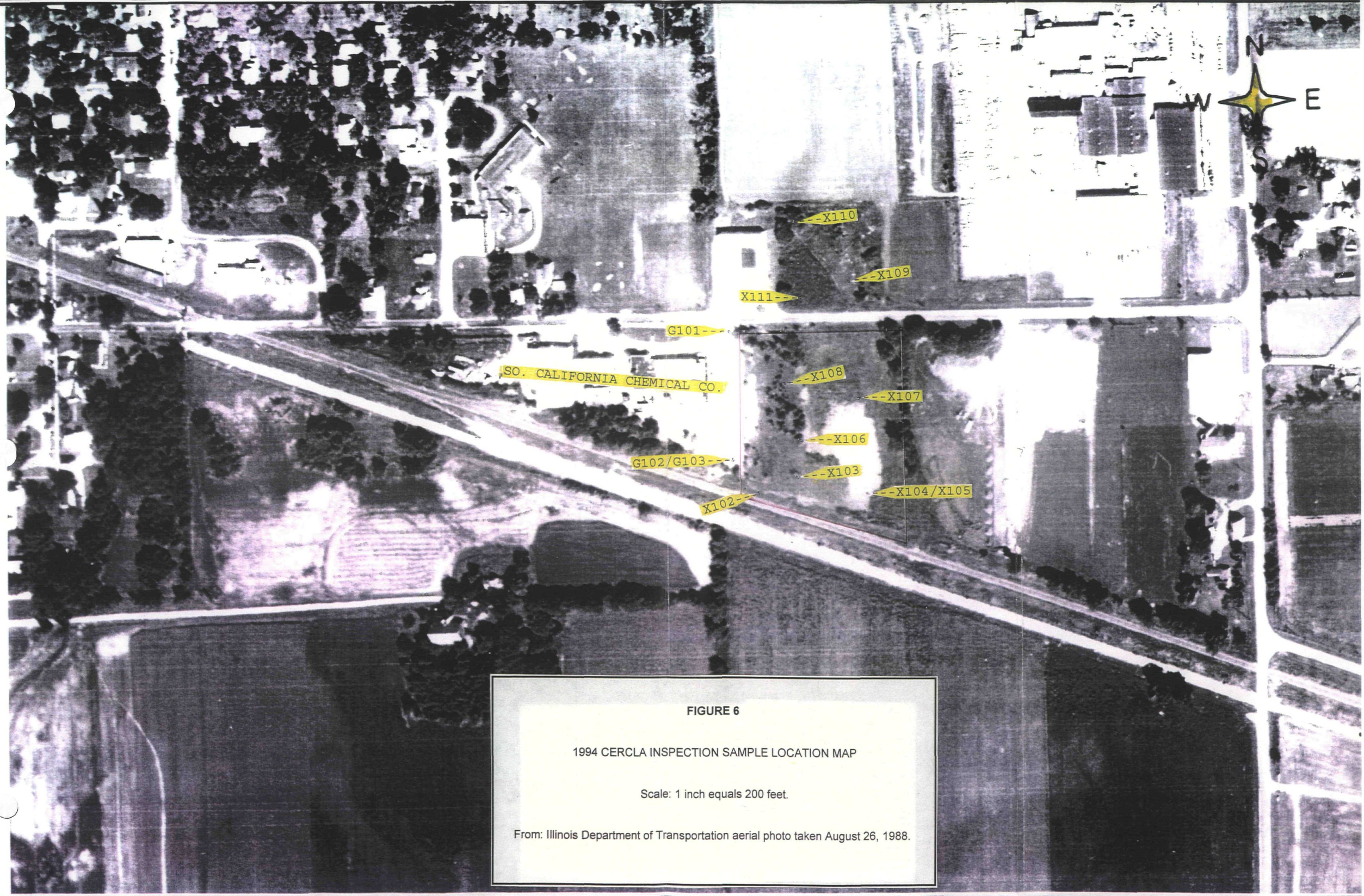

FIGURE 6

1994 CERCLA INSPECTION SAMPLE LOCATION MAP

Scale: 1 inch equals 200 feet.

From: Illinois Department of Transportation aerial photo taken August 26, 1988.

TABLE 1
Soil Sample Description

Sample Date Time	Depth	Location	Appearance
X101 4-15-98 07:10	0 to 3 inches	Background soil sample collected at Union Park, located approximately one-half mile northwest of the dump area.	Black loam.
X102 4-15-98 09:30	3 to 3.5 feet	Soil sample collected at the northwest portion of the dump area, approximately 33 feet east of the west property line and 86 feet south of the fence along Jefferson Street, at location G101.	Fill material.
X103 4-15-98 11:00	5 to 7 feet	Soil sample collected at the southwest portion of the dump area, 69 feet east and 84 feet north of the property lines, below a layer of printed circuit boards.	Dark silty loam.
X104 4-14-98 13:30	8 to 9 feet	Soil sample collected approximately 200 feet east of the Bar-B-Q sauce company, in a wetland area containing piles of dirt.	Brown medium to coarse sand and gravel.
X105 X106 3-14-98 18:20	4 to 6 feet	Soil sample collected at the east-central portion of the dump area, approximately 62 feet west of the east property line and 258 feet south of Jefferson Street, at the same location as G102 and G103.	Brown-grey clay.
X107 4-15-98 10:40	7 to 8 feet	Soil sample collected at the west end of the dump area, approximately 36 feet east of the west property line and 188 feet south of the fence along Jefferson Street.	Sandy clay.
X108 4-14-98 17:10	5 to 7 feet	Soil sample collected in the north end of the dump area, approximately 10 feet south of the fence along Jefferson Street, at the same location as G104.	Brown-grey medium sand.
X109 4-14-98 15:45	5 to 7 feet	Soil sample collected in the wetland located north of the dump area across Jefferson Street, approximately 150 feet east of the Bar-B-Q Co. at the same location as G105	Grey, dark sand.
X110 4-14-98 09:50	8 to 10 feet	Soil sample collected in the Techalloy field located approximately 400 feet north of the S. California Chemical dump area, at the same location as water sample G106.	Fine/coarse sand.
X111 4-14-98 11:50	7.5 to 8.5 feet	Soil sample collected in the Techalloy field, located approximately 650 feet north of the S. California Chemical dump area, at the same location as water sample G107.	Coarse sand and gravel.

TABLE 2
Groundwater Sample Descriptions

Sample Date Time	Depth	Location	Appearance
G501 4-15-98 09:20	760 feet	Background sample collected from Union Well Number 4, located (b) (9) of the dump area	Clear, not filtered for total metals.
G101 4-15-98 09:30	17 feet	GeoProbe sample collected at the northwest portion of the dump area, approximately 33 feet east of the west property line and 86 feet south of the fence along Jefferson Street.	Clear, collected from a black sand. Filtered for total metals.
G102 G103 4-14-98 18:00	13 feet	GeoProbe sample collected at the east-central portion of the dump area, approximately 62 feet west of the east property line and 258 feet south of Jefferson Street.	Cloudy, collected from a black sand. Filtered for total metals.
G104 4-14-98 16:45	15 feet	GeoProbe sample collected in the north end of the dump area, approximately 10 feet south of the fenc along Jefferson Street.	Clear, collected from a black sand. Filtered for total metals.
G105 4-14-98 15:20	11 feet	GeoProbe sample collected in the wetland located north of the dump area across Jefferson Street, approximately 150 feet east of the Bar-B-Q Co.	Clear, collected from a dark grey coarse sand. Filtered for total metals.
G106 4-14-98 09:20	12 feet	GeoProbe sample collected in the Techalloy field, located approximately 400 feet north of the S. California Chemical dump area.	Clear, collected from a medium-coarse sand and gravel. Filtered for total metals.
G107 4-14-98 11:10	12 feet	GeoProbe sample collected in the Techalloy field, located approximately 675 feet north of the S. California Chemical dump area.	Clear, collected from a coarse sand and gravel. Filtered for total metals.

SITE NAME: SOUTHERN CALIFORNIA CHEMICAL
ILD NUMBER: 059483081

TABLE 3
KEY SAMPLES
(Soil)

SAMPLING POINT / PARAMETER	X101 4-15-98 (Background)	X102 4-15-98	X103 4-15-98	X104 4-14-98	X105 4-14-98	X106 4-14-98	X107 4-15-98	X108 4-14-98	X109 4-14-98	X110 4-14-98	X111 4-14-98	TACO Cleanup Objectives	RAL
VOLATILES													
Tetrachloroethene	6.0 J	1.0 J	2.0 J	--	1.0 J	1.0 J	1.0 J	6.0 J	5.0 J	2.0 J	6.0 J	--	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg		ug/Kg
SEMIVOLATILES													
Phenol	--	--	30.0 J	--	--	--	--	--	--	--	--	100.0	470,000,000
Naphthalene	--	--	130.0 J	--	--	--	--	--	--	--	--	84.0	500,000
2-Methylnaphthalene	--	--	140.0 J	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	280.0 J	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	760.0 J	160.0 J	--	--	--	--	--	--	--	--	570.0	1,000,000
Dibenzofuran	--	970.0 J	200.0 J	--	--	--	--	--	--	--	--	--	--
Fluorene	--	1800.0 J	200.0 J	--	--	--	--	--	--	--	--	560.0	1,000,000
Phenanthrene	--	31000.0	1300.0	--	--	--	--	--	--	--	--	--	1,000,000
Anthracene	--	14000.0	540.0	--	--	--	--	--	--	--	--	12000.0	1,000,000
Carbazole	--	2200.0 J	87.0 J	--	--	--	--	--	--	--	--	0.6	--
Fluoranthene	--	82000.0	2500.0	38.0 J	--	--	--	--	--	--	--	4300.0	1,000,000
Pyrene	--	64000.0 J	1500.0	33.0 J	--	--	--	--	26.0 J	--	--	4200.0	1,000,000
Benzo(a)anthracene	--	40000.0	1100.0	23.0 J	--	--	--	--	--	--	--	2.0	1,000,000
Chrysene	--	42000.0	1100.0	24.0 J	--	--	--	--	--	--	--	160.0	1,000,000
bis(2-Ethylhexyl)phthalate	--	800.0 J	--	--	--	--	--	--	--	--	--	160.0	12,000,000
Benzo(b)fluoranthene	--	32000.0	830.0	23.0 J	--	--	--	--	--	--	--	5.0	--
Benzo(k)fluoranthene	--	31000.0	880.0	22.0 J	--	--	--	--	--	--	--	49.0	1,000,000
Benzo(a)pyrene	--	32000.0	500.0	--	--	--	--	--	--	--	--	8.0	1,000,000
Indeno(1,2,3-cd)pyrene	--	18000.0	390.0 J	--	--	--	--	--	--	--	--	14.0	1,000,000
Benzo(g,h,i)perylene	--	15000.0	24.0 J	--	--	--	--	--	--	--	--	--	1,000,000
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg		ug/Kg
PESTICIDES													
Endrin Ketone	--	46.0 J	1.4 J	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane	--	1.4 J	--	--	--	--	--	--	--	--	--	10.0	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	mg/Kg	ug/Kg
TENTATIVELY IDENTIFIED COMPOUNDS													
Hexane, 3-bromo	--	--	350.0 JN	--	--	--	--	--	--	--	--	--	--
Hexanoic acid	--	--	190.0 JN	--	--	--	--	--	--	--	--	--	--
9-Methyl-9-silafluorene + un	--	--	220.0 JN	--	--	--	--	--	--	--	--	--	--
Phenanthrene, 9-methyl-	--	--	230.0 JN	--	--	--	--	--	--	--	--	--	--
Methyl-phenanthrene or methy	--	--	240.0 JN	--	--	--	--	--	--	--	--	--	--
4H-cyclopenta[def]phenanthene	--	--	540.0 JN	--	--	--	--	--	--	--	--	--	--
Pyrene, 1-methyl- + unknown	--	--	330.0 JN	--	--	--	--	--	--	--	--	--	--
11h-benzo[b]fluorene	--	--	500.0 JN	--	--	--	--	--	--	--	--	--	--
Pyrene, 1-methyl-	--	--	200.0 JN	--	--	--	--	--	--	--	--	--	--
Benzo[b]naptho[2,1-d]thioph	--	--	270.0 JN	--	--	--	--	--	--	--	--	--	--
Triphenylene, 2-methyl-	--	--	220.0 JN	--	--	--	--	--	--	--	--	--	--
Benz[e]acephenanthrylene	--	--	270.0 JN	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	--	--	320.0 JN	--	--	--	--	--	--	--	--	--	--
1,2:3,4-dibenzoanthracene	--	--	210.0 JN	--	--	--	--	--	--	--	--	--	--
3-hexen-2-one, 5-methyl-	--	--	--	89.0 JN	--	--	--	--	--	--	--	--	--
Hexanoic acid	--	--	--	94.0 JN	--	95.0 JN	--	--	--	--	90.0 JN	--	--
Propanoic acid, 2-methyl-, 1	--	--	--	60.0 JN	--	--	--	--	--	--	--	--	--
2,5-Hexanedione	--	--	--	--	--	--	140.0 JN	--	--	--	--	--	--
Pentanoic acid	--	--	--	--	--	--	--	200.0 JN	--	--	--	--	--
Anthracene, 2-methyl-	--	7400.0 JN	--	--	--	--	--	--	--	--	--	--	--
4H-Cyclopenta[def]phenanthre	--	10000.0 JN	--	--	--	--	--	--	--	--	--	--	--
Bicyclohexyl, 4-phenyl-	--	13000.0 JN	--	--	--	--	--	--	--	--	--	--	--
1,4-Dcyclohexylbenzene	--	6800.0 JN	--	--	--	--	--	--	--	--	--	--	--
Cyclopenta(def)phenanthenenon	--	5600.0 JN	--	--	--	--	--	--	--	--	--	--	--
Benzene, 1,1'-cyclohexyliden	--	6700.0 JN	--	--	--	--	--	--	--	--	--	--	--
11H-Benzo[b]fluorene	--	14000.0 JN	--	--	--	--	--	--	--	--	--	--	--
Pyrene, 1-methyl-	--	85000.0 JN	--	--	--	--	--	--	--	--	--	--	--
7H-benz[de]anthracen-7-one	--	13000.0 JN	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]naptho[2,1-d]thioph	--	9200.0 JN	--	--	--	--	--	--	--	--	--	--	--
3,4-Dihydrocyclopenta(cd)pyr	--	5300.0 JN	--	--	--	--	--	--	--	--	--	--	--
Cyclopenta[cd]pyrene	--	7500.0 JN	--	--	--	--	--	--	--	--	--	--	--
11H-benzo(a)carbazole + unkn	--	7600.0 JN	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene, 1-methyl-	--	8900.0 JN	--	--	--	--	--	--	--	--	--	--	--
Perylene	--	6100.0 JN	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	--	25000.0 JN	--	--	--	--	--	--	--	--	--	--	--
1,2:3,4-Dibenzoanthracene	--	7200.0 JN	--	--	--	--	--	--	--	--	--	--	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	mg/Kg	ug/Kg
INORGANICS													
Aluminum	8130.0	4750.0	8660.0	4320.0	11200.0	10400.0	13500.0	1310.0	3490.0	1350.0	1720.0	--	310.0
Antimony	--	42.9 J	2.7 J	--	--	--	1.8 J	--	--	--	--	0.006	--
Arsenic	4.4 J	25.7 J	4.8 J	2.5 J	2.3 J	1.2 J	6.4 J	0.7 J	1.2 J	3.8 J	1.8 J	0.05	200.0
Barium	97.2	54.4	71.0	39.4	39.5	38.1	58.5	6.8	20.8	13.2	7.0	2.0	--
Beryllium	0.4	2.2	0.8	0.2	0.5	0.4	0.7	--	--	--	--	0.004	40.0
Cadmium	--	0.6	0.7	--	--	--	--	--	--	--	--	0.005	25.0
Calcium	2000.0	11800.0	22300.0	15000.0	--	--	--	461.0	1010.0	85900.0	74600.0	--	--
Chromium	13.3	2180.0	31.1	9.8	16.6	15.6	88.9	3.5	9.1	5.4	6.2	0.1	400.0
Cobalt	3.7	14.1	7.2	2.4	2.4	2.1	3.0	--	2.6	2.2	1.9	1.0	--
Copper	10.0 J	44600.0 J	450.0 J	13.0 J	9.6 J	9.8 J	1960.0 J	2.1 J	4.1 J	9.0 J	4.6 J	0.65	5000.0
Iron	12300.0	134000.0 J	19700.0 J	9170.0 J	12900.0 J	8730.0 J	31600.0 J	1850.0 J	7450.0 J	6400.0	5780.0 J	5.0	--
Lead	16.8	333.0	1240.0	32.5	7.8 J	6.7	10.9	2.2	4.0	3.8	2.4	0.0075	1000.0
Magnesium	1430.0	6410.0	13200.0 J	4820.0 J	2210.0	2020.0 J	2010.0 J	385.0 J	1240.0 J	43600.0 J	44100.0 J	--	--
Manganese	433.0	332.0	532.0	155.0	60.1	51.5	54.7	9.6	96.4	268.0	188.0	0.15	--
Mercury	--	0.4 J	--	--	--	--	--	--	--	--	--	0.002	1600.0
Nickel	8.1 J	158.0 J	65.0 J	13.6 J	7.8 J	6.7 J	14.1 J	1.7 J	5.9 J	5.5 J	4.8 J	0.1	2.0
Potassium	555.0	344.0	875.0	398.0	714.0	590.0	721.0	107.0	352.0	167.0	86.1	--	--
Selenium	--	1.5	--	--	--	--	--	--	--	--	--	0.05	2300.0
Silver	--	6.6	--	--	--	--	0.6	--	--	--	--	0.05	2300.0
Sodium	120.0	280.0	190.0	157.0	123.0	106.0	119.0	97.4	138.0	236.0	182.0	--	--
Thallium	--	7.4	--	--	--	--	1.2	--	--	--	--	0.002	55.0
Vanadium	25.8	14.9	23.7	15.6	18.6	14.9	44.4	4.6	12.4	8.2	8.4	0.049	--
Zinc	35.0	482.0	225.0	66.6	51.0	45.7	51.2	6.8	23.0	21.9	18.6	5.0	160000.0
Cyanide	0.2 J	0.4 J	0.6 J	0.1 J	0.09 J	0.07 J	0.7 J	0.1 J	--	0.3 J	--	0.2	350.0
PH	6.0	7.9	6.9	7.1	7.4	7.3	4.4	7.1	7.0	8.0	7.4	--	--
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

Cleanup Objectives are based on the Illinois Environmental Protection Agency's Tiered Approach to Corrective Action Objectives. The objectives presented in this table are based on Tier 1 Soil Component of the Groundwater Ingestion Exposure Route Values for Class I groundwater.

SITE NAME: S. CALIFORNIA CHEMICAL
ILD NUMBER: 059483081

TABLE 4
KEY SAMPLES
(Groundwater)

SAMPLING POINT / PARAMETER	G501 4-15-98 (Background)	G502 4-15-98	G101 4-15-98	G102 4-14-98	G103 4-14-98	G104 4-14-98	G105 4-14-98	G106 4-14-98	G107 4-14-98	TACO Tier 1 Class I Groundwater	MCL's
VOLATILES											
Methylene Chloride	--	--	--	--	--	--	--	--	1.0 J	5.0	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	74.0	7.0	7.0
1,2-Dichloroethene(total)	--	--	2.0 J	--	--	--	--	--	--	--	--
Trichloroethene	--	--	1.0 J	--	--	--	--	--	55.0	5.0	5.0
Benzene	--	--	--	--	--	--	--	--	54.0	5.0	5.0
Tetrachloroethene	--	--	2.0 J	--	--	--	--	--	--	5.0	5.0
Toluene	--	--	--	--	--	--	--	--	55.0	1000.0	1000.0
Chlorobenzene	--	--	--	--	--	--	--	--	55.0	100.0	100.0
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
SEMIVOLATILES											
Phenol	--	--	--	--	0.6 J	1.0 J	--	2.0 J	--	100.0	--
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
PESTICIDES											
beta-BHC	--	--	0.015 J	--	--	--	--	--	--	--	--
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TENTATIVELY IDENTIFIED COMPOUNDS											
Cyclohexanol	--	--	--	3.0 JN	2.0 JN	29.0 JN	--	9.0 JN	--	--	--
1-Formylcyclopentene	--	--	--	--	7.0 J	6.0 J	--	26.0 J	--	--	--
1,2-Cyclohexanediol	--	--	14.0 JN	--	12.0 JN	12.0 JN	--	33.0 JN	--	--	--
Nonanoic acid	--	--	--	--	--	2.0 JN	--	--	3.0 JN	--	--
1,4-Pentadiene, 3,3-dimethyl	--	--	--	--	--	--	--	--	3.0 JN	--	--
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
INORGANICS											
Aluminum	--	--	34.6 J	--	35.8 J	--	238.0 J	--	--	--	--
Copper	--	8.1	732.0	--	--	--	--	--	--	700.0	1300.0
Manganese	9.1	9.4	272.0	156.0	156.0	--	--	--	--	150.0	--
Nickel	--	--	8.8	--	1.1 J	--	--	--	--	100.0	100.0
Sodium	15100.0	15100.0	177000.0	--	--	--	--	--	--	--	--
Vanadium	--	--	--	5.3	5.3	--	1.6	--	--	49.0	--
Zinc	--	--	15.3 J	8.8 J	10.8 J	1.3 J	5.5 J	3.9 J	9.2 J	5000.0	--
Cyanide	--	--	--	--	1.9 J	--	--	--	--	200.0	200.0
Sulfate	--	--	160.0	18.0	18.0	50.0	18.0	36.0	24.0	400000.0	--
Chloride	--	--	84.0	30.0	30.0	15.0	9.0	26.0	50.0	200000.0	--
Ammonia	0.68	0.59	87.40	--	--	--	--	--	--	--	--
PH	--	--	7.0	7.0	6.0	6.0	7.0	6.5	7.0	--	--
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Groundwater Remediation Objectives are based on the Illinois Environmental Protection Agency,s Tiered Approach to Corrective Action Objectives. The objectives presented in this table are based on Tier 1 Remedi
Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route for Class I Groundwater.

NAME: So. California Chemical Co.
'LD NUMBER 059483081

TABLE 5
1994 KEY SAMPLES
(Soil)

SAMPLING POINT / PARAMETER	X101 5-5-94 (Background)	X102 5-4-94	X103 5-4-94	X104 5-4-94	X105 5-4-94 (Duplicate)	X106 5-5-94	X107 5-5-94	X108 5-5-94	X109 5-5-94	X110 5-5-94	X111 5-5-94	TACO Cleanup Objectives	RAL
VOLATILES													
Tetrachloroethene	11 U	--	2 J	--	--	2 J	--	--	--	--	--	--	--
Ethylbenzene	11 U	--	0.60 J	--	--	--	--	--	--	--	--	13.00	78,000,00
Xylene(total)	11 U	--	3 J	2 J	2 J	--	--	--	--	--	--	150.00	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	mg/Kg	ug/Kg
SEMIVOLATILES													
Isophorone	370 U	--	810	--	--	--	--	--	--	--	--	8.00	42,000,00
Phenanthrene	370 U	--	250.00 J	--	--	--	--	--	--	--	31.00 J	--	1,000,000
Anthracene	370 U	--	32 J	--	--	--	--	--	--	--	--	12000.00	1,000,000
Di-n-Butylphthalate	370 U	--	47.00 J	--	--	--	--	--	--	--	--	2300.00	78,000,00
Fluoranthene	370 U	--	320 J	--	--	--	--	--	--	--	54 J	4300.00	1,000,000
Pyrene	370 U	--	250.00 J	--	--	--	--	--	--	--	45.00 J	4200.00	1,000,000
Benzo(a)anthracene	370 U	--	150 J	--	--	--	--	--	--	--	--	2.00	1,000,000
Chrysene	370 U	--	150.00 J	--	--	--	--	--	--	--	--	160.00	1,000,000
bis(2-Ethylhexyl)phthalate	21 J	--	--	--	--	74 J	--	--	--	250 J	--	160.00	12,000,00
Benzo(b)fluoranthene	370 U	--	150.00 J	--	--	--	--	--	--	--	--	5.00	--
Benzo(k)fluoranthene	370 U	--	120 J	--	--	--	--	--	--	--	--	49.00	1,000,000
Benzo(a)pyrene	370 U	--	120.00 J	--	--	--	--	--	--	--	--	8.00	1,000,000
Indeno(1,2,3-cd)pyrene	370 U	--	94 J	--	--	--	--	--	--	--	--	14.00	1,000,000
Benzo(g,h,i)perylene	370 U	--	100.00 J	--	--	--	--	--	--	--	--	--	1,000,000
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	mg/Kg	ug/Kg
TENTATIVELY IDENTIFIED COMPOUNDS													
Phosphoric acid, dioctadecyl	--	--	--	--	--	760 NJ	--	--	--	--	--	--	--
.gamma.-Sitositol	--	--	--	--	--	910.00 NJ	--	--	--	--	--	--	--
Benzo(e)pyrene	--	--	490 NJ	--	--	--	--	--	--	--	--	--	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	mg/Kg	ug/Kg
PESTICIDES													
Heptachlor	1.9 U	--	5.1 P	--	2.6	--	--	--	--	--	--	23.00	38000.00
4,4'-DDE	3.7 U	--	6.10	--	--	--	--	--	--	--	--	54.00	500,000
Endrin	3.7 U	--	--	--	--	6.2 P	--	--	--	--	--	1.00	230,000
4,4'-DDD	3.7 U	--	9.10	--	--	--	--	--	--	--	--	16.00	710,000
4,4'-DDT	3.7 U	--	6.8 P	--	--	--	--	--	--	--	--	32.00	390,000
Endrin aldehyde	3.7 U	--	8.60 P	--	--	6.40	--	--	--	--	--	--	--
Aroclor-1248	37 U	--	120	--	--	--	--	--	--	--	--	0.04	22,000
Aroclor-1254	37 U	--	240.00 P	--	--	--	--	--	--	--	--	0.04	22,000
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	mg/Kg	ug/Kg
INORGANICS													
Beryllium	0.44 B	--	--	--	--	3.4	--	--	--	--	--	0.004	40.00
Cadmium	0.89 U	--	--	--	--	2.80	--	--	--	--	--	0.005	25.00
Calcium	1430	--	33000	--	--	64100	--	--	--	--	--	--	--
Chromium	14.1	55.40	1090.00	--	--	1150.00	--	--	--	--	--	0.10	400.00
Cobalt	6.9 B	--	22.8	--	--	--	--	--	--	--	--	1.00	--
Copper	8	1060.00	22400.00	1050.00	1110.00	35400.00	458.00	232.00	29.50	167.00	--	0.65	5000.00
Iron	12400	--	52100	--	--	--	--	--	--	--	--	5.00	--
Lead	10.7	--	71.40	--	--	113.00	--	--	--	--	--	0.0075	1000.00
Magnesium	1800	--	19000	--	--	41600	--	--	--	--	--	--	--
Nickel	7.1 B	--	72.00	--	--	37.10	--	--	--	--	--	0.10	2.00
Silver	0.64 U	--	2.8	--	--	1.1 B	--	--	--	--	--	0.05	2300.00
Sodium	31.4 B	--	--	--	--	131.00 B	--	--	--	--	--	--	--
Zinc	35.5	--	215	--	--	170	--	--	--	--	--	5.00	16000.00
Cyanide	0.57 U	--	0.68	--	--	3.00	0.89	1.50	--	--	--	0.20	350.00
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

NAME: So. California Chemical Co.
ILD NUMBER 059483081

TABLE 6
1994 KEY SAMPLES
(Groundwater)

SAMPLING POINT PARAMETER	G501 5-4-94 (Background)	G101 5-4-94	G102 5-4-94	G103 5-4-94 (Duplicate)	G502 5-4-94 (Duplicate)	TACO Tier 1 Class 1 Groundwater	MCL's
VOLATILES							
Methylene Chloride	1.0 J	8.0 J	7.0 J	12.0	1.0	5.0	--
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
SEMIVOLATILES							
bis(2-Ethylhexyl)phthalate	2.0 UJ	3.0 J	--	--	--	6.0	--
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TENTATIVELY IDENTIFIED CO							
Disulfide, dimethyl	--	--	--	8.0 NJ	--	--	--
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/l	ug/L
PESTICIDES							
INORGANICS							
Arsenic	2.0 U	7.6 B	5.9 B	5.9 B	--	50.0	50.0
Calcium	59800.0	226000.0	--	--	60000.0	--	--
Iron	269.0	10000.0	2930.0	1880.0	278.0	5000.0	1000.0
Magnesium	30600.0	119000.0	35500.0	35200.0	30600.0	--	--
Manganese	6.0 U	57.4	36.3	35.4	--	150.0	150.0
Nickel	18.0 U	31.3 B	--	--	--	100.0	100.0
Potassium	6100.0 U	8340.0	969.0 B	811.0 B	--	--	--
Selenium	2.0 U	4.3 B	--	1.1 B	--	50.0	50.0
Sodium	15600.0	578000.0	--	--	27400.0	--	--
Thallium	2.0 U	0.9 B	--	1.1 B	--	2.0	2.0
Zinc	49.0 U	10.6 B	3.3 B	4.1 B	--	5000.0	5000.0
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

TABLE 7
1994 CERCLA Inspection Soil Sample Descriptions

Sample Date Time	Depth	Location	Appearance
X101 5-5-94 12:50 PM	6 to 12"	Background sample collected at Union Park locate approximately 3200 feet fromthe site at a point 183' south and 48' west of the intersection of Main and Elm, on the east side of the park.	Black loam.
X102 5-4-94 2:20 PM	2 to 3'	Collected between the dump area and CNW railroa tracks 22' south and 29' east of the southeast corner of the Southern California Chemical Co. fence.	Brown to black sandy clay.
X103 5-4-94 3:40 PM	6" to 8"	Collected in the dump area 129' east and 31' north of the southeast corner of the Southern California Chemical Co. fence.	Brown sandy clay layer approximately 2 inches thick.
X104 X105 5-4-94 4:15 PM	2' to 3'	Sample and duplicate sample collected in the dump area 307' east and 37' north of the southeas corner of the Southern California Chemical Co. fence.	Black sandy clay.
X106 5-5-94 10:25 AM	2' to 3'	Collected in the dump area 99' 6" north and 133' east of the southeast corner of the S. California Chemical Co. fence.	Black sandy clay.
X107 5-5-94 10:45 AM	2' to 3'	Collected in the dump area 66' west and 162' south of the northeast corner of the fence along Jefferson Street.	Black sandy clay.
X108 5-5-94 11:05 AM	2.5' to 3.5'	Collected in the dump area 95' east and 125' south of the northwest corner of the S. California Chemical Co. fence.	Black sandy clay.
X109 5-5-94 11:25 AM	6" to 12"	Collected in the wetland area located north across Jefferson Street 90' west and 120' north of the southeast corner of fence.	Black sandy clay.
X110 5-5-94 11:45 AM	6" to 12"	Collected in the wetland area located across Jefferson Street 60' east and 39' south of the north end of the fence located along the east side of the So good Bar B Que Co.	Medium brown clayey sand.
X111 5-5-94 12:15 PM	6" to 12'	Collected in the wetland area located across Jefferson Street 75' north and 135' east of the northwest corner of the dump area fence.	Black sandy clay.

TABLE 8
1994 CERCLA Inspection Groundwater Sample Descriptions

Sample Date Time	Depth	Location	Appearance
G501 4-15-98 9:20 AM	760 feet	Background sample collected from Union Well Number 4, located (b) (9) of the dump area	Clear, not filtered for total metals.
G101 4-15-98 9:30 AM	17 feet	GeoProbe sample collected at the northwest portion of the dump area, approximately 33 feet east of the west property line and 86 feet south of the fence along Jefferson Street.	Clear, collected from a black sand. Filtered for total metals.
G102 G103 4-14-98 6:00 PM	13 feet	GeoProbe sample collected at the east-central portion of the dump area, approximately 62 feet west of the east property line and 258 feet south of Jefferson Street.	Cloudy, collected from a black sand. Filtered for total metals.
G104 4-14-98 4:45 PM	15 feet	GeoProbe sample collected in the north end of the dump area, approximately 10 feet south of the fenc along Jefferson Street.	Clear, collected from a black sand. Filtered for total metals.
G105 4-14-98 3:20 PM	11 feet	GeoProbe sample collected in the wetland located north of the dump area across Jefferson Street, approximately 150 feet east of the Bar-B-Q Co.	Clear, collected from a dark grey coarse sand. Filtered for total metals.
G106 4-14-98 9:20 AM	12 feet	GeoProbe sample collected in the Techalloy field, located approximately 400 feet north of the S. California Chemical dump area.	Clear, collected from a medium-coarse sand and gravel. Filtered for total metals.
G107 4-14-98 11:10 AM	12 feet	GeoProbe sample collected in the Techalloy field, located approximately 675 feet north of the S. California Chemical dump area.	Clear, collected from a coarse sand and gravel. Filtered for total metals.

APPENDIX A

SITE 4-MILE RADIUS MAP

SDMS US EPA Region V

Imagery Insert Form

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Specify Type of Document(s) / Comment

4-MILE RADIUS MAP

☐ **Other:**

APPENDIX B

15-MILE SURFACE WATER MAP

NOTE: There is no Surface Water Pathway for this site.

APPENDIX D

IEPA SITE PHOTOGRAPHS

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropene
Vinyl Chlorde	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropene
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroehtene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis (2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether
Hexachlorobutadiene	Anthracene

2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene
Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl)Phthalate
bis(2-chloroethoxy)Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a)Anthracene
2-Chloronaphthalene	3-3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b)Fluoranthene
3-Nitroaniline	Benzo(k)Fluoranthene
Acenaphthene	Benzo(a)Pyrene
Dibenzofuran	Ideno(1,2,3-cd)Pyrene
Dimethyl Phthalate	Dibenz(a,h)Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i)Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	

Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlordane
Heptachlor	gamma-Chlordane
Aldrin	Toxaphene
Heptachlor epoxide	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DDE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobolt	Vanadium
Copper	Zinc
Iron	Cyanide
Lead	Sulfide
Magnesium	

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

N	Not used	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

APPENDIX E

ANALYTICAL RESULTS (Volume 2)

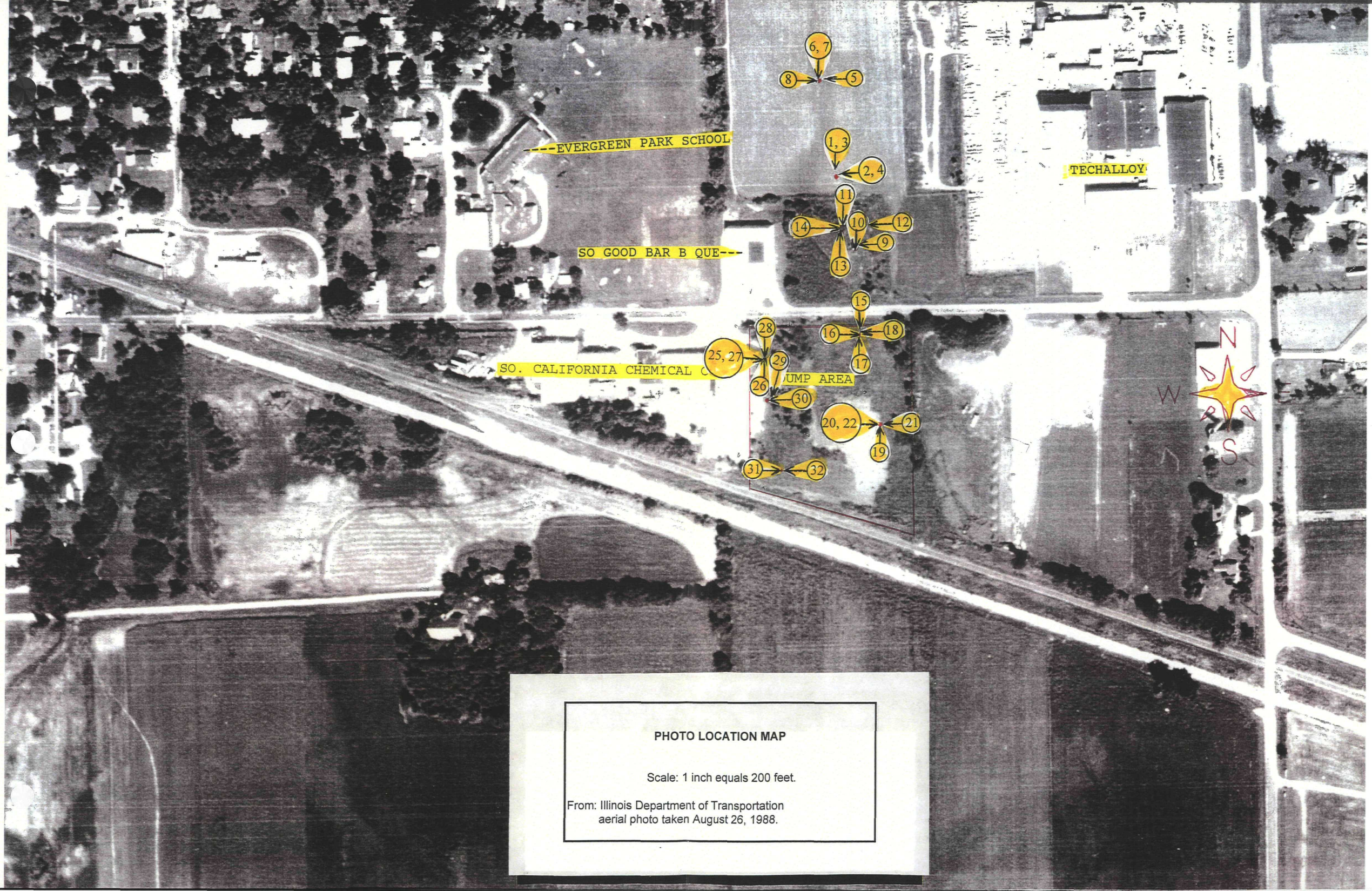
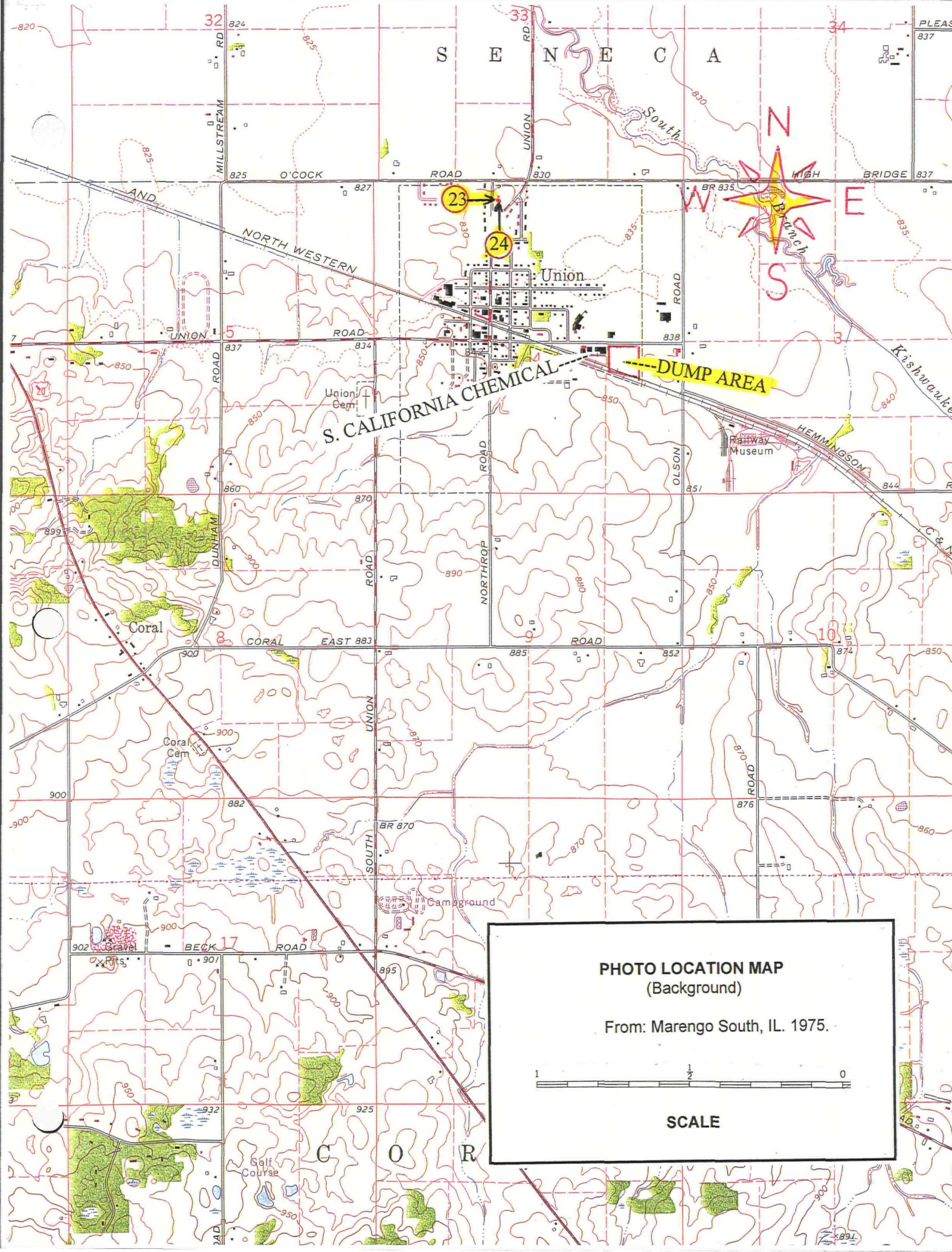


PHOTO LOCATION MAP

Scale: 1 inch equals 200 feet.

From: Illinois Department of Transportation
aerial photo taken August 26, 1988.


S E N E C A
Union
DUMP AREA
S. CALIFORNIA CHEMICAL
Coral
Union Cem
Coral Cem
Camp ground
Gravel Pits
Golf Course
Railway Museum
O'COCK ROAD
HIGH BRIDGE
BECK ROAD
CORAL EAST
MILLSTREAM RD
UNION ROAD
DUNHAM ROAD
NORTHROP ROAD
OLSON ROAD
HEMMINGSON
NORTH WESTERN
South Branch
Kishwaukee
N
S
E
W
PHOTO LOCATION MAP
(Background)
From: Marengo South, IL. 1975.
1 ½ 0
SCALE

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 9:20	SITE NAME: S. California Chemical

PHOTOGRAPH TAKEN BY: R.Casper

COMMENTS: Picture taken toward: South.

Photo Number 1.

Sample G106 was collected in the Techalloy hay field depth of 12 feet.

DATE: 4-14-98

TIME: 9:20

PHOTOGRAPH TAKEN BY: R. CASPER

COMMENTS: Picture taken toward: West.

Photo Number 2.

The fence in the background is the west property boundary of Union Evergreen School.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 9:50	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: South.	
Photo Number 3.	
Sample X110 was	
collected at the	
same location as	
G106 at a depth of	
8 to 10 feet.	

DATE: 41-14-98
TIME: 9:50
PHOTOGRAPH TAKEN BY: R. CASPER
COMMENTS: Picture taken toward: West.
Photo Number 4.
X110. The sample
consisted of a
fine to coarse
sand.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 11:10	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: West.	
Photo Number 5.	
Sample G107 was	
collected at a	
depth of 12 feet	
from a coarse	
sand and gravel.	

DATE: 4-14-98
TIME: 11:10
PHOTOGRAPH TAKEN BY: R. CASPER
COMMENTS: Picture taken toward: South.
Photo Number 6.
The building in
background is a
company that makes
Bar-B-Q sauce.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 11:50	SITE NAME: S. California Chemical

PHOTOGRAPH TAKEN BY: R.Casper

COMMENTS: Picture taken toward: South.

Photo Number 7.

Sample X111 was collected at a depth of 7.5 to 8.5 feet of coarse sand and gravel.

DATE: 4-14-98

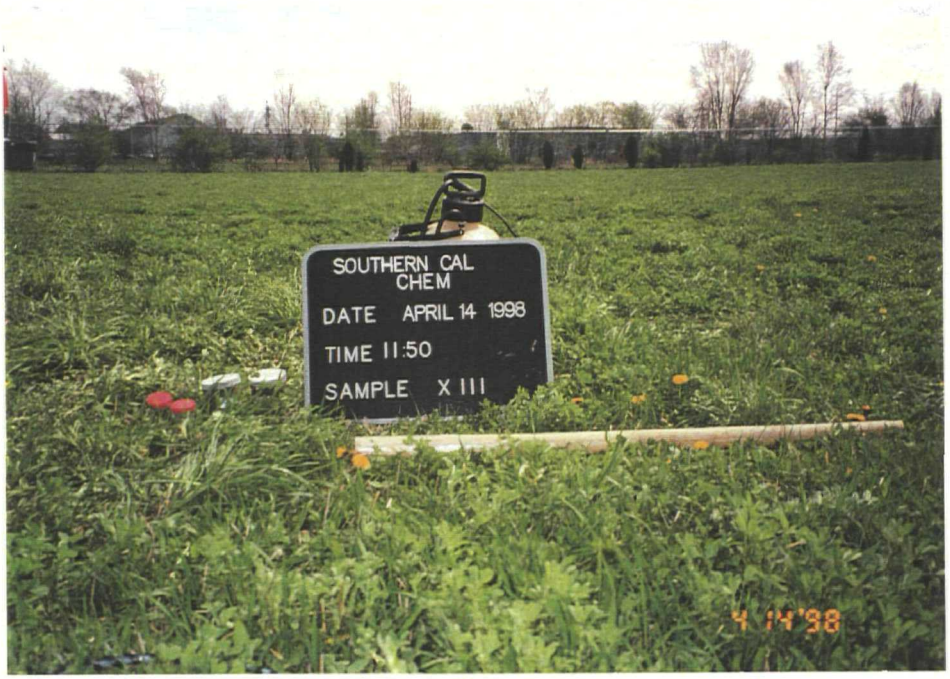
TIME: 11:50

PHOTOGRAPH TAKEN BY: R. CASPER

COMMENTS: Picture taken toward: East.

Photo Number 8.

Sample X111. The Techalloy facility can be seen in the background . The field also belongs to Techalloy.



Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 13:30	SITE NAME: S. California Chemical

PHOTOGRAPH TAKEN BY: R.Casper

COMMENTS: Picture taken toward: West.

Photo Number 9.

Sample X104 was collected in the Techalloy hay field at a depth of 8 to 9 feet.

DATE: 4-14-98

TIME: 13:30

PHOTOGRAPH TAKEN BY: R. CASPER

COMMENTS: Picture taken toward: South.

Photo Number 10.

X104 consisted of a dark brown medium to coarse sand and gravel.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 15:20	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: South.	
Photo Number 11.	
Sample G105 was	
collected at a low	
area in the	
thicket east of	
the Bar-B-Q Co.	

DATE: 4-14-98
TIME: 15:20.
PHOTOGRAPH TAKEN BY: R. CASPER
COMMENTS: Picture taken toward: West.
Photo Number 12.
G105 Collected at
a screened depth
of 9 to 10 feet at
same location as
X109.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 15:45	SITE NAME: S. California Chemical

PHOTOGRAPH TAKEN BY: R.Casper

COMMENTS: Picture taken toward: North.

Photo Number 13.

Sample X109 was collected at a depth of 5 to 7 feet at the same location as G105.

DATE: 4-14-98

TIME: 15:45

PHOTOGRAPH TAKEN BY: R. CASPER

COMMENTS: Picture taken toward: East.

Photo Number 14.

The area had piles of dirt that were used by people as ramps for motor bikes.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 16:45	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: South.	
Photo Number 15	
Sample G104 was	
collected at the	
north side of the	
dump area at a	
depth of 15 feet.	

DATE: 4-14-98	
TIME: 16:45	
PHOTOGRAPH TAKEN BY: R. CASPER	
COMMENTS: Picture taken toward: East.	
Photo Number 16.	
G104. Jefferson	
street can be	
seen beyond the	
fence at the top	
left of the photo.	

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 17:10	SITE NAME: S. California Chemical

PHOTOGRAPH TAKEN BY: R.Casper

COMMENTS: Picture taken toward: North.

Photo Number 17.

Sample X108 was collected at the same location as G104 at a depth of 5 to 7 feet.

DATE: 4-14-98

TIME: 17:10

PHOTOGRAPH TAKEN BY: R. CASPER

COMMENTS: Picture taken toward: West.

Photo Number 18.

The soil sample consisted of a brown-grey medium sand.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 18:00	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: North.	
Photo Number 19.	
Sample G102 and	
duplicate G103	
were collected at	
a depth of 11 to	
13 feet.	

DATE: 4-14-98	
TIME: 18:00	
PHOTOGRAPH TAKEN BY: R. CASPER	
COMMENTS: Picture taken toward: East.	
Photo Number 20.	
The bulding at the	
top right of the	
photo is offsite	
and part of David	
Windsor Industries	

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-14-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 18:20	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: West.	
Photo Number 21.	
Sample X105 and	
duplicate X106 was	
collected at a	
depth of 4 to 6	
feet.	

DATE: 4-14-98	
TIME: 18:20	
PHOTOGRAPH TAKEN BY: R. CASPER	
COMMENTS: Picture taken toward: East.	
Photo Number 22.	
X105/X106 soil	
sample consisted	
of a brown-grey	
clay.	

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-15-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 7:10	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: East.	
Photo Number 23.	
Background sample	
X101 was collected	
at Union Park at a	
depth of 0 to 3	
inches.	

DATE: 4-15-98
TIME: 7:10
PHOTOGRAPH TAKEN BY: R. CASPER
COMMENTS: Picture taken toward: North.
Photo Number 24.
Union Park is one-
half mile north-
west of the site.
Sample was a black
soil.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-15-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 9:30	SITE NAME: S. California Chemical

PHOTOGRAPH TAKEN BY: R.Casper

COMMENTS: Picture taken toward: East.

Photo Number 25.

Sample G101 was collected in the dump area at a depth of 17 feet.

DATE: 4-15-98

TIME: 9:30

PHOTOGRAPH TAKEN BY: R. CASPER

COMMENTS: Picture taken toward: North.

Photo Number 26.

G101. The Southern California plant is the blue building in the background.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-15-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 9:30	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: East.	
Photo Number 27.	
Sample X102 was	
collected the same	
location as G101	
at a depth of 3.5	
feet.	

DATE: 4-15-98
TIME: 9:30
PHOTOGRAPH TAKEN BY: R. CASPER
COMMENTS: Picture taken toward: South.
Photo Number 28.
X102 consisted of
fill material from
the dump area.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-15-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 10:40	SITE NAME: S. California Chemical
PHOTOGRAPH TAKEN BY: R.Casper	
COMMENTS: Picture taken toward: South.	
Photo Number 29.	
Sample X107 was	
collected in the	
dump area at a	
depth of 8 feet.	

DATE: 4-15-98
TIME: 10:40
PHOTOGRAPH TAKEN BY: R. CASPER
COMMENTS: Picture taken toward: West.
Photo Number 30.
X107 consisted of
a sandy clay. The
S. California
Chemical plant is
in the background.

Site Team Evaluation Prioritization Inspection Photos

DATE: 4-15-98	SITE ILD#: 059483081 COUNTY: Mc Henry
TIME: 11:00	SITE NAME: S. California Chemical

PHOTOGRAPH TAKEN BY: R.Casper

COMMENTS: Picture taken toward: East.

Photo Number 31. Sample X103 was collected at 5 to 7 feet and consisted of fill and circuit boards.

DATE: 4-15-98

TIME: 11:00

PHOTOGRAPH TAKEN BY: R. Casper

COMMENTS: Picture taken toward: West.

Photo Number 32 X103. The buildings of S. California Chemical lie beyond the fence in the background.